

**Claims**

- Cl. 1 A method for increasing neuronal cell AP-1 or NF-IL6 transcription factor activity in a subject, comprising administering to the subject an amount of an isolated peptide  
5 which comprises the amino acid sequence of SEQ ID NO:1 effective to increase the activity of AP-1 or NF-IL6 in the subject.
- Cl. 2 The method of claim 1, wherein the isolated peptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4 and SEQ ID NO:5.
- 10 Cl. 3 The method of claim 2, wherein the isolated peptide is conjugated to a compound which facilitates transport across the blood-brain barrier into the brain.
- Cl. 4 A method for binding calcium comprising contacting a calcium containing environment with the composition of claim 3.
- Cl. 5. The method of claim 4, wherein the isolated peptide comprises the amino acid  
15 sequence set forth in SEQ ID NO:10.
- Cl. 6 A method for identifying a calcium-binding peptide comprising  
providing a putative calcium-binding peptide,  
contacting the putative calcium-binding peptide with an environment containing  
calcium, and  
20 determining the calcium binding of the peptide.
- Cl. 7 The method of claim 6, wherein the putative calcium binding peptide is a variant of the amino acid sequence set forth in SEQ ID NO:1 or SEQ ID NO:19.
- Cl. 8. The method of claim 6, wherein the step of providing a putative calcium-binding peptide comprises providing a library comprising peptides having the amino acid sequence  
25 set forth in SEQ ID NO:1 or SEQ ID NO:19.

- Cl. 9 A method for identifying a peptide which increases AP-1 or NF-IL6 transcription factor activity, comprising
- providing a peptide,
- contacting the peptide with a cell which can express AP-1 or NF-IL6 transcription
- 5 factor activity, and
- determining the AP-1 or NF-IL6 transcription factor activity to identify the peptide which increases AP-1 or NF-IL6 transcription factor activity.
- Cl. 10. The method of claim 9, wherein the peptide is a variant of the amino acid sequence
- 10 set forth in SEQ ID NO:1 or SEQ ID NO:19.
- Cl. 11 The method of claim 9, wherein the step of providing a peptide comprises providing a library comprising peptides having the amino acid sequence set forth in SEQ ID NO:1 or SEQ ID NO:19.